

REMARKS

This is a timely response submitted within the first three months after the issuance of the non-final Office Action dated November 28, 2003. Claims 2-7, 9-25, 18-33 and 41 are pending in this application. The Examiner has indicated that claims 14, 19, and 21-24 are allowed, claims 28-33 are objected to for depending upon a rejected base claim but would be allowable if rewritten in independent form including all the limitations of the base claim and intervening claims, and claims 2-7, 9-13, 15, 18, 20, 25-27 and 41 are rejected.

Claims 25 and 41 have been amended, a typographical error was corrected in the specification, and remarks addressing the rejections are submitted herein. Applicants would like to thank the Examiner for the acknowledgement of the allowed and objected to, but otherwise allowable claims.

***Claims 41, 5, 11, and 20******Rejected - 35 U.S.C. §102(b) - Schonhoffer***

In the Office Action, the Examiner has rejected claims 41, 5, 11, and 20 under 35 U.S.C. §102(b) as being anticipated by DE 19622827 to Schonhoffer. This reference has a U.S. counterpart document which is identified as U.S. Patent No. 6,015,436 ("Schonhoffer"). Schonhoffer teaches an implant having a center implant part 3 threadably mounted on tubular sleeve 5' of inner implant part 1, and an outer implant part 2 that is axially assembled over tubular sleeve 5' of inner implant part 1 such that parts 1 and 2 may move axially with respect to each other. The center implant part 3 facilitates increasing (Fig. 2) and decreasing (Fig. 1) the height of the assembled implant by rotatably moving up and down sleeve 5' of part 1. Specifically, beginning from the minimal length configuration depicted in Fig. 1, as part 3 is rotated, part 1

is projected vertically upwards, thereby increasing the overall height dimension of the implant. In any given configuration of the implant, however, according to Schonhoffer's Col. 3, lines 44-48, part 3 only serves as an axial stop for part 2, preventing part 2 from moving up sleeve 5' of part 1 any higher than the location of part 3 on part 1, since part 2 abuts part 3. Notably, part 3 does not prevent downward movement of part 2 relative to part 1. Similarly, if part 2 is below part 3 and not abutting it, part 2 is allowed to freely move downwards as well as upwards relative to part 1 until it abuts part 3.

**Claim 41**

Contrary to the recitations in claim 41, Schonhoffer's part 3 does not have a locked or unlocked position, such that in the unlocked position part 3 allows parts 1 and 2 to axially move either farther apart or closer together, and in the locked position part 3 prevents parts 1 and 2 from moving farther apart or closer together. Applicants' claim 41 has been amended to more clearly claim this aspect of the invention.

In view of the distinctions between Schonhoffer and Applicants' claim 41, it is submitted that Schonhoffer does not anticipate Applicant's claim 41.

Additionally, Schonhoffer does not make obvious claim 41 in any way. Schonhoffer has an internally threaded part 3 that only exhibits one and the same mechanical function in any position. Because this function is always the same, part 3 does not have a locked and unlocked position where the difference between the positions has an effect on parts 1 and 2. The function of part 3 is to facilitate extension or retraction of part 1 through threaded rotation of part 3 on part 1, and to prevent part 2 from moving up along part 1 any further than the location of part 3 on part 1. Schonhoffer provides no

indication or suggestion how it would be possible to make an obvious change to the invention such that part 3 would have one position where it would allow parts 1 and 2 to freely move in the axial direction with respect to each other, nor how it would be moveable to another position where part 3 would prevent relative axial movement between parts 1 and 2.

In view of the above, it is submitted that Schonhoffer does not anticipate or make obvious claim 41. Consequently, claim 41 is believed to be allowable.

***Claims 5 and 11***

Claims 5 and 11 are each dependent upon claim 41. Since Schonhoffer does not anticipate or make obvious independent claim 41 as discussed above, it is submitted that, axiomatically, Schonhoffer does not anticipate or make obvious claims 5 and 11 which are dependent upon claim 41. Of course, it is understood that these claims are independently patentable as well.

***Claim 20***

As discussed above, since Schonhoffer does not teach a locking clip having an unlocked and a locked position for locking the outer and inner member in relative axial position with respect to each other. Moreover, Schonhoffer is completely devoid of any teachings directed to a locking clip having an inner surface including first surface portions and second surface portions, each being curvilinear and having different radii of curvature. Therefore, Schonhoffer does not anticipate or make obvious claim 20.

***Claims 3, 4, 6, 7, 9, 10, 12, 15, 18, and 26  
Rejected - 35 U.S.C. §103(a) - Schonhoffer***

The Examiner has rejected claims 3, 4, 6, 7, 9, 10, 12, 15, 18, and 26 under 35 U.S.C. §103(a) over Schonhoffer, citing that each and every element of each of these claims would be obvious to one of ordinary skill in the art in view of Schonhoffer.

Claims 3, 4, 6, 7, 9, 10, 12, 15, 18, and 26 are either directly or indirectly dependent upon claim 41. Since Schonhoffer does not anticipate or make obvious independent claim 41 as discussed above, it is submitted that, axiomatically, Schonhoffer does not make obvious claims 3, 4, 6, 7, 9, 10, 12, 15, 18, and 26 which are dependent upon claim 41. Of course, it is understood that these claims are independently patentable as well.

***Claims 2 and 20***

***Rejected - 35 U.S.C. §103(a) - Schonhoffer and Matsumoto***

The Examiner has rejected claims 2 and 20 under 35 U.S.C. §103(a) over Schonhoffer in view of U.S. Patent No. 4,880,343 to Matsumoto ("Matsumoto"), positing that it would have been obvious to one of ordinary skill in the art to combine these two references, and that the combination results in each and every element of claims 2 and 20.

***Claim 2***

Claim 2 is directly dependent upon claim 41. Schonhoffer has been discussed above, and is submitted as clearly not anticipating or making obvious independent claim 41.

Matsumoto discloses a lock nut prepared from a shape memory alloy and serving as a backup member for a fastening nut. Matsumoto does not contain any teachings to fill in the deficiencies outlined in Schonhoffer discussed above, such that the combination of Schonhoffer and Matsumoto would result in all

the claimed features of claim 2, which is dependent upon claim 41. Nor is there any incentive to combine these two references in view of the divergent fields of art, the lack of any indications in Schonhoffer that a lock nut such as the one disclosed in Matsumoto would be desirable, or that the combination of the two references would result in anything different from what is already taught in Schonhoffer.

With regard to the combination of the two references, substituting the nut of Matsumoto for part 3 of Schonhoffer would not change the function of the Schonhoffer invention such that it would result in Applicant's claim 2. More specifically, the non-threaded internal portions 15 of the Matsumoto nut 1 would not engage anything on either part 1 or 2 of the Schonhoffer invention such that Matsumoto's nut 1 would facilitate locking Schonhoffer's parts 1 and 2 in any position with respect to one another.

For at least the reason that the combination of Schonhoffer and Matsumoto does not result in all the claimed features of claim 2, it is submitted that the obviousness rejection of claim 2 over Schonhoffer in view of Matsumoto is believed to be obviated. As such, claim 2 is believed to be in condition for allowance.

***Claim 20***

Independent claim 20 recites, *inter alia*, that the locking clip is moveable between a first unlocked position and a second locked position for locking the first and second members in a relative axial position with respect to one another. Schonhoffer, as discussed above, has significant deficiencies relating to the Applicant's claimed locking ring.

Matsumoto has also been discussed above in connection with the obviousness rejection of dependent claim 2. It is submitted that the combination of Schonhoffer and Matsumoto does not teach all the limitations of claim 20 since part 3 of Schonhoffer, substituted with all or any part of the invention of Matsumoto, would still not result in all the claimed features of claim 20. Namely, the combination would not result in Schonhoffer's part 3 having a locked and unlocked position on Schonhoffer's prosthesis, and being moveable between these positions such that when in the locked position, part 3 locks the first and second members in a relative axial position with respect to one another.

For at least the reason that the combination of Schonhoffer and Matsumoto does not result in all the claimed features of claim 20, it is submitted that the obviousness rejection of claim 20 over Schonhoffer in view of Matsumoto is believed to be obviated. As such, claim 20 is believed to be in condition for allowance.

***Claim 13***

***Rejected - 35 U.S.C. §103(a) - Schonhoffer and Barbera***

The Examiner has rejected claim 13 under 35 U.S.C §103(a) over Schonhoffer in view of EP 567424 to Barbera ("Barbera"), positing that it would have been obvious to combine these two references, and that the combination would result in each and every element of claim 13.

Claim 13 is a dependent claim that is ultimately dependent upon independent claim 41. Schonhoffer has been discussed above, and is submitted as clearly not anticipating or making obvious independent claim 41.

Barbera discloses a vertebral prosthesis for the substitution of a vertebra. Similar to the analysis of

dependent claim 2, Barbera, rather than Matsumoto, also does not contain any teachings to fill in the deficiencies outlined in Schonhoffer discussed above, such that the combination of Schonhoffer and Barbera would result in all the claimed features of dependent claim 13. Namely, the combination of Schonhoffer and Barbera still does not address and fill in the deficiencies of Schonhoffer relating to Applicants' locking ring, as discussed above. Consequently, for at least this reason, it is submitted that the obviousness rejection of claim 13 over Schonhoffer in view of Barbera is believed to be obviated. As such, claim 13 is believed to be in condition for allowance.

***Claim 25******Rejected - 35 U.S.C. §102(b) - Rabbe***

The Examiner has rejected independent claim 25 under 35 U.S.C §102(b) as anticipated by WO 96/17564 to Rabbe et al. ("Rabbe"), positing that Rabbe teaches all the elements of claim 25. In response, Applicants have amended claim 25 to recite that the locking clip at least partially circumferentially encompasses the outer member.

Rabbe discloses two outer members 22 identified therein as end plates, one inner member 21 identified therein as a cylindrical body, and elongate element 55 identified in Rabbe as a screw assembly, and by the Examiner, as the locking clip. The screw assembly 55 in Rabbe is not taught to at least partially circumferentially encompass either of the two outer members 22, or even the inner member 21. Indeed, this is not even remotely obvious from the teachings of Rabbe. Consequently, it is submitted that currently amended claim 25 is not anticipated, or in any way made obvious by Rabbe, and as such, is believed to be in condition for allowance.

**Claim 27****Rejected - 35 U.S.C. §102(b) - Erickson**

The Examiner has rejected independent claim 27 under 35 U.S.C. §102(b) as anticipated by U.S. Patent No. 5,482,417 to Erickson ("Erickson"), citing that the preamble of claim 27 is given no weight, and that Erickson, which teaches a cam and wedge-type self-locking mechanism, otherwise discloses every element in claim 27. Specifically, the Examiner has identified Erickson's parts 16, 56 and 14 to be comparable to Applicant's recited inner member, outer member, and locking clip, respectively, and posits that, along with these parts, Erickson teaches all the recitations in Applicant's claim 27.

The preamble notwithstanding, Erickson clearly does not contain all the recitations of Applicants' claim 27, and, in fact, functions completely differently from Applicants' invention as claimed in claim 27. For example, claim 27 recites that the locking clip is *rotatably mounted on said outer member*, and mounted there in such a manner that it is limited in axial movement *on* the outer member. In stark contrast, Erickson's rotating carrier 14 is "threaded within a bore of the tool block 122", and not on the cam head 56 as identified by the Examiner. Fig. 5; Col. 5, line 23. As such, carrier 14 is not limited in axial movement *on* tool block 122. Consequently, Erickson does not disclose this feature of claim 27, and so does not anticipate the claim.

Additionally, claim 27 recites that there are mating surfaces on the locking portions of the locking clip and on the corners of the inner member for interengagement to *prevent* axial movement between the locking clip and inner member. Again, in complete contrast, Erickson shows surfaces on the inside of rotating carrier 14 (locking clip) that engage surfaces on driver 16 (inner member), but the engagement in no way prevents



axial movement between the two parts. Rather, *it is just the opposite*. Free axial movement must exist between these two parts or else they will not function properly. This is because these two parts, according to Erickson, are intended to be used similarly to a lock and key arrangement, where the driver 16 is inserted in the rotating carrier 14 to turn the carrier, but then axially removed from engagement therewith. See, for example, Col. 4, lines 56-58; Col. 5, lines 48-51 and 63-66.

It is submitted that, for at least the reasons discussed above, Erickson does not teach all the recitations of Applicant's claim 27, and consequently, does not anticipate, or in any way make this claim obvious. As such, claim 27 is believed to be in condition for allowance.

### **Conclusion**

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that the Examiner telephone Applicant's attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

By K. Caploon  
Konstantin A. Caploon  
Registration No.: 51,527  
LERNER, DAVID, LITTENBERG,  
KRUMHOLZ & MENTLIK, LLP  
600 South Avenue West  
Westfield, New Jersey 07090  
(908) 654-5000  
Attorney for Applicant